

Remarks

The non-final office action of June 30, 2004 has been reviewed and the Examiner's comments carefully considered. The Examiner's comments will be addressed in turn. The examiner is thanked for forwarding the undersigned a copy of page 4 of the office action that was missing from the original document.

The examiner has rejected claims 1-9 under 35 USC 112 first paragraph suggesting that the term "helical thread" is not supported in the specification. The examiner suggests that the specification is not sufficiently complete at the time of filing to convey the claimed invention to one of ordinary skill in the art. The examiner's conclusions are respectfully traversed. The examiners attention is directed to figure 1 and the corresponding description in the specification. Figure 1 clearly illustrates that the angled portion 42 forms a thread with a pitch in the same direction as the threads 18 of the cap. Please note that both the portion 42 and the threads 18 are slanted from left to right in the figure. As known in the art, a "thread" is formed by a helical ridge with the pitch of the thread referencing a pitch angle of the helix measured relative to a plane extending perpendicular to the axis of the helix. The term "helical thread" accurately describes what is shown in the figures and described in the specification. Reconsideration of the examiner's rejection is respectfully requested.

The examiner has rejected the claims 19-29 under 35 U.S.C. § 112, second paragraph for the term "hoop like characteristics". The term as used in this application has been clearly defined in the specification and is referencing any bead, rib or other projection that extends at least 360 degrees around the circumference of the cap. This definition has been added in earlier response to the claims to avoid any confusion in the terms. The meets and bounds of the claims are clearly defined. The claims do not include "elements not disclosed" as suggested by the examiner.

The examiner has rejected claims 1-9 and 19-29 as being anticipated by the teachings of U.S. Patent 4,971,211 to Kusz. The Examiner asserts that the the subject matter described in the Kusz patent includes an angled projection 20a that forms a one way lead in thread. In order to anticipate a claim each and every element of the claim

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must be found in the anticipatory patent. The Kusz patent fails to teach or suggest all of the claim limitations of any one of the claims of the present application.

The Kusz patent is distinctly different from the present claimed invention. Regarding independent claim 1, which is repeated above, the Kusz patent fails to teach or suggest “a substantially continuous internal projection below the leaders, wherein the projection includes an angled portion for a portion of a circumference of the tamper-evident portion, the angled portion positioned at a pitch angle relative to the common top plane and forming a one-way lead-in helical thread for the projection, wherein the one-way lead-in thread formed by the angled portion has a pitch extending in a same direction as the internal thread of the annular side wall, whereby the one-way lead-in thread formed by the angled portion allows the projection of the tamper-evident portion to be threaded past a retaining ridge of a container” (emphasis added). One embodiment of the Kusz patent shown in figure 9 does have a continuous projection or segment 20b that “extends substantially along the entire band” (column 3, line 9 of the Kusz patent) and it includes a tapered end (called a curved second hinge 23). Even if the examiner is attempting to read the curved hinge 23 as the angled portion of the projection, this does not form, define or have a “pitch extending in the same direction as the internal thread” (see figure 3 of the Kusz patent). Further this hinge 23 does not form a “lead in helical thread” that allows the tamper evident portion to be threaded past a retaining ridge of the container. The Kusz teaches a projection in the same plane all around the closure – essentially the same as much of the prior art of record.

Claim 2 depends from claim 1 and further defines that “the angled portion forming the one way lead-in thread extends for about ninety degrees of the circumference.” The second hinge 23 of the Kusz patent extends for only a small fraction of the circumference as shown in the drawings. The ninety degree thread of the present invention is not taught or suggested in the prior art.

Claim 3 depends from claim 2 and further defines “a plug seal on the top, wherein the angled portion forming the one way lead-in thread includes a rounded end, and wherein the angled portion is angled with the same pitch angle as the threads on the side wall.” The Kusz patent shows a closure with a sealing member at the top which is clearly

not a plug seal as shown in figure 2. The Kusz patent cannot support an anticipation of claim 3. Further there is clearly no teaching or suggestion of an angled portion forming a thread with the “the same pitch angle as the threads on the side wall.” As noted above the curved hinge 23 curves opposite to the direction or pitch of the side wall threads.

Claim 5 depends from claim 4 (which depends from claim 1) and further defines that “the rib is substantially rectangular in cross-section, has a substantially uniform cross section around the circumference, and has a length-to-width ratio of at least two, and is angled away from the top.” In the Kusz patent the curved hinge 23 prevents the projection 23 from having a substantially uniform cross section. For the length of the hinge 23 the cross section of the projection is clearly different from the remaining portions. This is contrasted with the present invention in which the projection has a very small rounded end and a uniform cross section throughout. Further, the rib of the present invention is angled away from the top whereas the rib in the Kusz patent is angled toward the top. This is the opposite from the present claimed invention.

Independent claim 6 is directed to a tamper evident band and defines “a substantially continuous internal projection on the lower band below the leaders, wherein the projection includes an angled portion for a portion of a circumference of the lower band, the angled portion positioned at a pitch angle relative to the score line plane and forming a one-way lead-in helical thread for the projection, whereby the one-way lead-in thread formed by the angled portion allows the projection of the tamper-evident portion to be threaded past a retaining ridge of a container.” Claim 6 is allowable for much of the same reasons discussed above in connection with claim 1. Namely the Kusz patent fails to teach or suggest a continuous projection with an angled portion forming a lead in thread as defined in the claims.

Claim 7 depends from claim 6 and defines limitations further distinguishing the present invention from the prior art similar to claim 2 discussed above.

Claim 9 depends from claim 6 and further defines that the projection has “a substantially uniform cross section around the circumference, and is angled away from the leaders.” This is not taught or suggested in the Kusz patent as discussed above in connection with claim 5.

Independent claim 19 defines “a substantially continuous internal rib extending inwardly directly from the side structure and having a length-to-width ratio of at least one and one-half, wherein the rib extends about 360° around the side structure to maintain hoop-like characteristics and extends inwardly from the side structure away from the top as molded and in use on a container, and wherein substantially the entire length of the rib is positioned between the common top plane and the distal plane.” As noted above the Kusz patent teaches the opposite orientation for the projection 20b. The projection 20 b is shown as extending TOWARD the top. Further the segment 20b is not extending from the side but is described as attached to the band 22 through “extending hinge 22 adjacent the free edge of the band 20” (column 2 line 45-47 as well as shown in the figures). It is this edge molded projection which is inverted after molding that the present invention is improving upon. Regardless, the Kusz patent teaches the opposite of the claimed construction.

Claim 21 depends from claim 19 and further defines the substantially constant cross section of the projection not found in the Kusz patent as discussed above.

Claim 22 depends from claim 19 and further defines that the “rib is designed to flex toward the side structure during exiting of the mold and forms a rigid element relative to the side structure following molding.” This is not possible in the Kusc arrangement as evident from a review of the projection 20a.

Independent claim 24 also defines that the projection “extends inwardly from the lower band away from the top as molded and in use on a container, and wherein substantially the entire length of the rib is positioned between the common top plane and the distal plane.” The Kusc patent teaches away from this orientation of the projection. The present application evidences the molding concerns that must be addressed though this change in orientation of the projection. The Kusz patent clearly teaches away from the present claimed construction.

Claim 26 depends from claim 25 and defines that “the rib has a substantially constant cross section around a circumference of the lower band” which is not found in the Kusz patent as discussed above.

Claim 27 depends from claim 26 and defines that "the rib is designed to flex during exiting of the mold and forms a rigid interference element for the tamper evident portion following molding", which cannot be found in the Kusz patent as discussed above.

Claim 28 depends from claim 24 and defines that "the rib includes an angled portion for a portion of a circumference of the lower band, the angled portion positioned at a pitch angle relative to the common top plane and forming a one-way lead-in helical thread for the rib, whereby the one-way lead-in thread formed by the angled portion allows the rib of the tamper-evident portion to be threaded past a retaining ridge of a container" which is not taught or suggested in the Kusz patent as discussed above.

Claims 1-9 and 19-29 remain in the application and favorable action of the claims, as amended, is respectfully requested.

Respectfully Submitted;

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